UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/655,023	09/05/2003	Rupert Maier	32860-000604/US	6040

30596   7590   11/16/2009
HARNESS, DICKEY & PIERCE, P.L.C.
P.O.BOX 8910
RESTON, VA 20195

EXAMINER
MAI, KEVIN S

ART UNIT	PAPER NUMBER
2456	

MAIL DATE	DELIVERY MODE
11/16/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/655,023	MAIER ET AL.
	Examiner	Art Unit
	KEVIN S. MAI	2456

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>10 July 2009</u>.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-26</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-26</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
         application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   This Office Action has been issued in response to Applicant's Amendment filed July 10,
2009.

2.   Claims 1, 3, 9-11, 13, 15, 16 and 21-26 have been amended. Claims 1-26 have been
examined and are pending.

Response to Arguments

3.   Applicant's arguments filed July 10, 2009 have been fully considered but they are not
persuasive.

4.   Applicant's arguments with respect to the claim objection have been considered but they
are not persuasive. Applicant disagrees with the interpretation given in the previous claim
objection and have amended the claims to distinctly claim the subject matter regarded as the
invention. Stating that support for these amendments appear in at least figure 3 and paragraph
[0028] of the published application. Examiner disagrees. While the claim objection has been
withdrawn due to the amendments, it appears that the invention the applicant is attempting to
claim is not supported by the specification and in fact the cited portions appear to support
examiners interpretation. Paragraph [0028] of applicant's published application states "the
master sends a message to all the network nodes in the subnetwork which it is to synchronize
instructing the nodes not to send any more messages without a request until further notice." This
would indicate that after the nodes are told not to send messages, they would only send messages
in response to a request. This request is seen to come from the master. To the examiner this
interpretation is clear from the cited paragraph, however to further support this interpretation

paragraph [0031] of applicant's published application states "the master of the subnetwork sends

a delay-time measurement message to every network node in the subnetwork. Each individual

network node is successively addressed and <u>requested</u> to send an acknowledgement to the master

immediately." Accordingly it is seen that it is the master that is sending requests and

furthermore that the other nodes do not send messages without a request from the master.

5.   Applicant's arguments with respect to claim 1 have been considered but they are not

persuasive. Applicant argues that there is no prior request to the central switch from any of the

Rawson nodes and that Rawson fails to teach of fairly suggest "by instructing the network nodes

not to send any message to the master without a prior request". Examiner disagrees. Rawson

does not need to disclose a prior request to the central switch from any of the nodes because

applicant's invention does not contain this feature. At the very least the current claim language

does not limit itself to the interpretation that the referenced "prior request" is from the nodes to

the master. However, beyond that, applicant's specification does not support such a limitation.

There is no indication in applicant's specification that it is the nodes other than the master that

send the requests. The cited paragraph actually indicates otherwise.

6.   Paragraph [0028] of applicant's published application states "the master sends a message

to all the network nodes in the subnetwork which it is to synchronize instructing the nodes not to

send any more messages without a request until further notice." This would indicate that after

the nodes are told not to send messages, they would only send messages in response to a request.

This request is seen to come from the master. To the examiner this interpretation is clear from

the cited paragraph, however to further support this interpretation paragraph [0031] of applicant's

published application states "the master of the subnetwork sends a delay-time measurement

message to every network node in the subnetwork. Each individual network node is successively

addressed and <u>requested</u> to send an acknowledgement to the master immediately." Accordingly

it is seen that it is the master that is sending requests and furthermore that the other nodes do not

send messages without a request from the master. These appear to be the only paragraphs in

applicant's specification that use the word 'request' and it would appear that both of them

indicate it is the master that is sending the requests.

7.   Thus applicant's assertion that there is no prior request to the central switch from any of

the Rawson nodes is seen to be directed toward subject matter not in applicant's specification.

Furthermore applicant's argument that Rawson fails to teach of fairly suggest "by instructing the

network nodes not to send any message to the master without a prior request" is similarly

directed toward subject matter not in applicant' specification. Examiner's previous rejection is

seen to disclose the subject matter that appears to be supported by applicant's specification.

8.   Applicant's arguments with respect to the remaining claims are the same as those used

for claim 1. As such, examiner recites the same rationale used above.

Claim Objections

9.   In view of the amendments made the pending claim objections have been withdrawn.

Claim Rejections - 35 USC § 103

10.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person

> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11.   This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12.   Claims 1, 2, 4-8, 12, 14, 16, 17, 19, 20 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pat. No. 6351821 to Voth (hereinafter "Voth") and further in view of US Pat. No. 6687756 to Rawson, III (hereinafter "Rawson").

13.   **As to Claim 1,** Voth discloses **a method for synchronizing network nodes in a subnetwork, where the network nodes have timers and at least one of the network nodes undertakes the function of a master, the time on the master being used as $\underline{a}$ reference time for the subnetwork, the method comprising:**
[insuring no unauthorized communication takes place in the subnetwork by instructing the network nodes not to send any message <u>to the master</u> without a <u>prior</u> request]
sending a delay-time measurement message to every network node in the subnetwork in order to ascertain a signal delay time (Figure 6 of Voth discloses sending a SYNC message to the slave nodes (602));

sending a time setting message to every network node (Figure 6 of Voth discloses sending an INFO message to the slave nodes (624)**; and**

aligning the time on the network nodes with the reference time for the subnetwork (Figure 6 of Voth discloses the slave nodes receiving the INFO message (626) and then scheduling their time adjustments**),**

wherein each of the first three method steps are performed my by the master (Figure 6 of Voth discloses the master node performing those steps**).**

Voth does not explicitly disclose **insuring no unauthorized communication takes place in the subnetwork by instructing the network nodes not to send any message <u>to the master</u> without a <u>prior</u> request to the master.**

However, Rawson discloses this (Column 2 lines 1-25 of Rawson disclose prior to reading the time base register values packet traffic among the set of nodes is halted by broadcasting a halt traffic packet. Then the time base register values are retrieved from each of the set of nodes, these are seen to be requests from the head. Thus it is seen that the nodes do not send any messages without a request from the head)

It would have been obvious to one of ordinary skill in the art at the time of invention to combine clock synchronization as disclosed by Voth, with halting normal packet traffic as disclosed by Rawson. One of ordinary skill in the art would have been motivated to combine because it makes it possible to transmit synchronization packets with a deterministic time delay (Column 4 lines 50-60 of Rawson). Furthermore it is seen that since the two invention are directed toward synchronization and as such it would also be use a known technique to improve similar devices in the same way.

14.   **As to Claim 2,** Voth-Rawson discloses the invention as claimed as described in claim 1,
further comprising storing the signal delay time for the network nodes in the master
(Column 11 lines 55-60 of Voth disclose each node in the cluster maintains a data repository and
each repository includes one entry for each node. Figure 10 discloses that this repository
contains entries for max delay (1016), min delay (1018) and average delay (1020)).

15.   **As to Claim 4,** Voth-Rawson discloses the invention as claimed as described in claim 1,
wherein the time on a network node is aligned with the reference time for the subnetwork
immediately after reception of the time setting message (Column 8 lines 20-25 of Voth
disclose that on receipt of the INFO message the slave node uses the mark time field in the
message to schedule the time at which the time clock will be updated. It is seen that it would
have been obvious for the mark time field to be set in such a fashion that the scheduled time to
update would be immediately upon receipt of the message itself. Since the time at which to
update the time clock is modifiable, having the time to update be the time of reception is an
obvious variant for a system that wishes to make the synchronization process take as little time
as possible).

16.   **As to Claim 5,** Voth-Rawson discloses the invention as claimed as described in claim 1,
wherein the time on a network node is aligned with the reference time for the subnetwork
by way of a step-by-step basis (Column 3 lines 10-15 of Voth disclose large adjustments in
time are achieved by gradually retarding or advancing the time clocks within the slave nodes).

17.   **As to Claim 6,** Voth-Rawson discloses the invention as claimed as described in claim 1,

wherein at least one step is repeated a plurality of times (Column 2 lines 50-55 of Voth

disclose that the system uses a repeating update cycle. Thus it is seen that all steps are repeated a

plurality of times).

18.   **As to Claim 7,** Voth-Rawson discloses the invention as claimed as described in claim 6,

wherein the master ascertains the signal delay time by sending a plurality of delay-time

measurement messages and using formation of a mean (Column 13 lines 23-50 of Voth

disclose that the master node updates the delay variables each time it receives a SYNC message.

Then since SYNC message are sent every cycle it is seen that the delay-time is ascertained

through a plurality of measurement messages. As to a mean being formed, column 13 line 45

discloses the formation of the average delay variable).

19.   **As to Claim 8,** Voth-Rawson discloses the invention as claimed as described in claim 1,

wherein the master ascertains all the network nodes which are part of the subnetwork

(Column 6 lines 20-21 of Voth disclose the method is done to synchronize all of the time clocks

and slave nodes in the cluster. Furthermore column 11 lines 55-60 disclose each node in the

cluster maintains a data repository and each repository includes one entry for each node. In view

of these two facts the master must have ascertained all the nodes).

20.   **As to Claim 12,** Voth-Rawson discloses the invention as claimed as described in claim 2,
wherein the time on a network node is aligned with the reference time for the subnetwork
immediately after reception of the time setting message (Column 8 lines 20-25 of Voth
disclose that on receipt of the INFO message the slave node uses the mark time field in the
message to schedule the time at which the time clock will be updated. It is seen that it would
have been obvious for the mark time field to be set in such a fashion that the scheduled time to
update would be immediately upon receipt of the message itself. Since the time at which to
update the time clock is modifiable, having the time to update be the time of reception is an
obvious variant for a system that wishes to make the synchronization process take as little time
as possible).

21.   **As to Claim 14,** Voth-Rawson discloses the invention as claimed as described in claim 2,
wherein the time on a network node is aligned with the reference time for the subnetwork
by way of a step-by-step basis (Column 3 lines 10-15 of Voth disclose large adjustments in
time are achieved by gradually retarding or advancing the time clocks within the slave nodes).

22.   **As to Claim 16,** Voth-Rawson discloses the invention as claimed as described in claim 4,
wherein the time on <ins>the</ins> network node is aligned with the reference time for the subnetwork
by way of a step-by-step basis (Column 3 lines 10-15 of Voth disclose large adjustments in
time are achieved by gradually retarding or advancing the time clocks within the slave nodes).

23.   **As to Claim 17,** Voth-Rawson discloses the invention as claimed as described in claim 2, **wherein the master ascertains all the network nodes which are part of the subnetwork** (Column 6 lines 20-21 of Voth disclose the method is done to synchronize all of the time clocks and slave nodes in the cluster. Furthermore column 11 lines 55-60 disclose each node in the cluster maintains a data repository and each repository includes one entry for each node. In view of these two facts the master must have ascertained all the nodes).

24.   **As to Claim 19,** Voth-Rawson discloses the invention as claimed as described in claim 4, **wherein the master ascertains all the network nodes which are part of the subnetwork** (Column 6 lines 20-21 of Voth disclose the method is done to synchronize all of the time clocks and slave nodes in the cluster. Furthermore column 11 lines 55-60 disclose each node in the cluster maintains a data repository and each repository includes one entry for each node. In view of these two facts the master must have ascertained all the nodes).

25.   **As to Claim 20,** Voth-Rawson discloses the invention as claimed as described in claim 5, **wherein the master ascertains all the network nodes which are part of the subnetwork** (Column 6 lines 20-21 of Voth disclose the method is done to synchronize all of the time clocks and slave nodes in the cluster. Furthermore column 11 lines 55-60 disclose each node in the cluster maintains a data repository and each repository includes one entry for each node. In view of these two facts the master must have ascertained all the nodes).

26.   **As to Claim 26,** Voth discloses **a method, comprising:**

[insuring no unauthorized communication takes place in a subnetwork by instructing the

network nodes not to send any message to s master without a prior request]

sending a delay-time measurement message to every network node in the subnetwork in

order to ascertain a signal delay time (Figure 6 of Voth discloses sending a SYNC message to

the slave nodes (602));

sending a time setting message to every network node (Figure 6 of Voth discloses sending an

INFO message to the slave nodes (624); and

aligning the time on the network nodes with a reference time for the subnetwork (Figure 6

of Voth discloses the slave nodes receiving the INFO message (626) and then scheduling their

time adjustments).

Voth does not explicitly disclose insuring no unauthorized communication takes

place in a subnetwork by instructing the network nodes not to send any message to s

master without a prior request.

However, Rawson discloses this (Column 2 lines 1-25 of Rawson disclose prior to

reading the time base register values packet traffic among the set of nodes is halted by

broadcasting a halt traffic packet. Then the time base register values are retrieved from each of

the set of nodes, these are seen to be requests from the head. Thus it is seen that the nodes do not

send any messages without a request from the head)

Examiner recites the same rationale to combine used in claim 1.

27.   Claims 3, 11, 13, 15 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Voth-Rawson and further in view of US Pat. No. 6973622 to Rappaport et al. (hereinafter

"Rappaport").

28.   **As to Claim 3,** Voth-Rawson discloses the invention as claimed as described in claim 1.

Voth-Rawson does not explicitly disclose **wherein a network node, upon receiving the delay-**

time measurement message, simulates the alignment of a time thereof with the reference

time at least once, and then sends a response to the master.

        However, Rappaport discloses this (Column 23 lines 9-26 of Rappaport disclose finding

the processing delays associated with each device in the network. Where processing delay is the

time required for the network device to process data sent to it. This is seen to be the same as

measuring delay by simulating the action because it is also measuring the processing delay of a

device)

        It would have been obvious to one of ordinary skill in the art at the time of invention to

combine the method of claim 1 as disclosed by Voth-Rawson, with simulating the process of

time alignment as disclosed by Rappaport. One of ordinary skill in the art would have been

motivated to combine to accurately predict round trip time of packets sent in the network

(Column 23 lines 42-46 of Rappaport). Since synchronization relies highly on compensating for

delay it would have been obvious to also account for the delay involved in actually processing

the time alignment request)

29.   **As to Claim 11,** Voth-Rawson discloses the invention as claimed as described in claim 2.

Voth-Rawson does not explicitly disclose **wherein a network node, upon receiving the delay-**

time measurement message, simulates the alignment of a time thereof with the reference

time at least once, and then sends a response to the master.

However, Rappaport discloses this (Column 23 lines 9-26 of Rappaport disclose finding

the processing delays associated with each device in the network. Where processing delay is the

time required for the network device to process data sent to it. This is seen to be the same as

measuring delay by simulating the action because it is also measuring the processing delay of a

device)

Examiner recites the same rationale to combine used in claim 3.

30.   **As to Claim 13,** Voth-Rawson-Rappaport discloses the invention as claimed as described

in claim 3, **wherein the time on the network node is aligned with the reference time for the**

subnetwork immediately after reception of the time setting message (Column 8 lines 20-25

of Voth disclose that on receipt of the INFO message the slave node uses the mark time field in

the message to schedule the time at which the time clock will be updated. It is seen that it would

have been obvious for the mark time field to be set in such a fashion that the scheduled time to

update would be immediately upon receipt of the message itself. Since the time at which to

update the time clock is modifiable, having the time to update be the time of reception is an

obvious variant for a system that wishes to make the synchronization process take as little time

as possible).

31.   **As to Claim 15,** Voth-Rawson-Rappaport discloses the invention as claimed as described

in claim 3, **wherein the time on the network node is aligned with the reference time for the**

subnetwork by way of a step-by-step basis (Column 3 lines 10-15 of Voth disclose large

adjustments in time are achieved by gradually retarding or advancing the time clocks within the

slave nodes**).**

32.   **As to Claim 18,** Voth-Rawson-Rappaport discloses the invention as claimed as described

in claim 3, **wherein the master ascertains all the network nodes which are part of the**

subnetwork (Column 6 lines 20-21 of Voth disclose the method is done to synchronize all of the

time clocks and slave nodes in the cluster. Furthermore column 11 lines 55-60 disclose each

node in the cluster maintains a data repository and each repository includes one entry for each

node. In view of these two facts the master must have ascertained all the nodes**).**

33.   Claims 9, 21 and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Voth-Rawson and further in view of US Pat. No. 6157957 to Berthaud (hereinafter "Berthaud").

34.   **As to Claim 9,** Voth-Rawson discloses the invention as claimed as described in claim 1**.**

Voth-Rawson does not explicitly disclose **wherein at least one network node in the**

subnetwork undertakes the function of the master in another subnetwork.

        However, Berthaud discloses this (Column 4 lines 34-35 of Berthaud discloses a master

of several slaves may also be a slave of another master)

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the method of claim 1 as disclosed by Voth-Rawson, with having a slave be a master of other slaves as disclosed by Berthaud. One of ordinary skill in the art would have been motivated to combine to make the system not reliant on a particular hierarchical organization (Column 4 lines 35-50 of Berthaud).

35.   **As to Claim 21,** Voth-Rawson discloses the invention as claimed as described in claim 2. Voth-Rawson does not explicitly disclose **wherein at least one network node in <u>the</u> subnetwork undertakes the function of the master in another subnetwork.**

However, Berthaud discloses this (Column 4 lines 34-35 of Berthaud discloses a master of several slaves may also be a slave of another master)

Examiner recites the same rationale to combine used in claim 9.

36.   **As to Claim 23,** Voth-Rawson discloses the invention as claimed as described in claim 4. Voth-Rawson does not explicitly disclose **wherein at least one network node in <u>the</u> subnetwork undertakes the function of the master in another subnetwork.**

However, Berthaud discloses this (Column 4 lines 34-35 of Berthaud discloses a master of several slaves may also be a slave of another master)

Examiner recites the same rationale to combine used in claim 9.

37.   **As to Claim 24,** Voth-Rawson discloses the invention as claimed as described in claim 5.

Voth-Rawson does not explicitly disclose **wherein at least one network node in <u>the</u>**

subnetwork undertakes the function of the master in another subnetwork.

         However, Berthaud discloses this (Column 4 lines 34-35 of Berthaud discloses a master

of several slaves may also be a slave of another master)

         Examiner recites the same rationale to combine used in claim 9.

38.   **As to Claim 25,** Voth-Rawson discloses the invention as claimed as described in claim 8.

Voth-Rawson does not explicitly disclose **wherein at least one network node in <u>the</u>**

subnetwork undertakes the function of the master in another subnetwork.

         However, Berthaud discloses this (Column 4 lines 34-35 of Berthaud discloses a master

of several slaves may also be a slave of another master)

         Examiner recites the same rationale to combine used in claim 9.

39.   Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Voth-Rawson

and further in view of US Pub. No. 2003/0158971 to Renganarayanan et al. (hereinafter

"Renganarayanan").

40.   **As to Claim 10,** Voth-Rawson discloses the invention as claimed as described in claim 1.

Voth-Rawson does not explicitly disclose **wherein the network nodes in <u>the</u> subnetwork are**

connected to one another by way of an optical transmission medium.

However, Renganarayanan disclose this (Paragraph [0049] of Renganarayanan discloses generally networks are connected via optical fiber, coaxial cable and twisted pair connections)

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the method of claim 1 as disclosed by Voth-Rawson, with using optical fibers as disclosed by Renganarayanan. One of ordinary skill in the art would have been motivated to combine because it is seen that it is generally known that networks are connected via optical fibers and as such it would have been obvious to use them to connect the network disclosed in Voth-Rawson.

41.   Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Voth-Rawson-Rappaport and further in view of Berthaud.

42.   **As to Claim 22,** Voth-Rawson-Rappaport discloses the invention as claimed as described in claim 3. Voth-Rawson-Rappaport does not explicitly disclose **wherein at least one network node in the subnetwork undertakes the function of the master in another subnetwork.**

However, Berthaud discloses this (Column 4 lines 34-35 of Berthaud discloses a master of several slaves may also be a slave of another master)

Examiner recites the same rationale to combine used in claim 9.

Conclusion

43.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

44.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

US 6324586 B1 - System for synchronizing multiple computers with a common timing reference

to Johnson; Aric R.

US 20050210153 A1 - Method and apparatus for time synchronization in a network data

processing system to Rich, Bruce Arland et al.

US 20050033862 A1 - Method for syncronization in networks to Blum, Philipp et al.

US 20030172179 A1 - System and method for performing clock synchronization of nodes

connected via a wireless local area network to del Prado Pavon, Javier et al.

US 20030154309 A1 - Method for synchronizing computer clocks in networks used for

information transmission, device for carrying out said method and data packet suitable for the

synchronization of computer clocks to Kero, Nikolaus et al.

US 20020073228 A1 - Method for creating accurate time-stamped frames sent between

computers via a network to Cognet, Yves et al.

US 7281061 B2 - Time managing apparatus for managing time to synchronize with other

apparatuses to Takeda; Hideyuki

US 7260653 B2 - Method and device for the synchronization between two networks to Le

Scolan; Lionel et al.

US 6535926 B1 - Time synchronization system for industrial control network using global

reference pulses to Esker; Lawrence W.

US 6134234 A - Master-slave synchronization to Kapanen; Jouko Juhani

US 5907685 A - System and method for synchronizing clocks in distributed computer nodes to

Douceur; John R.

        Any inquiry concerning this communication or earlier communications from the

examiner should be directed to KEVIN S. MAI whose telephone number is (571)270-5001. The

examiner can normally be reached on Monday through Friday 7:30 - 5:00 EST.

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Bunjob Jaroenchonwanit can be reached on 571-272-3913. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

   Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/K. S. M./
Examiner, Art Unit 2456

/Bunjob Jaroenchonwanit/

Supervisory Patent Examiner, Art Unit 2456